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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,443	06/26/2003	Raymond Dueck	VIDI-003	7140

7590

04/12/2005

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EXAMINER

RINEHART, KENNETH

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/608,443	DUECK ET AL.	
	Examiner	Art Unit	
	Kenneth B Rinehart	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 refers to "continuous rotational manner" which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 16 refers to "continuous rotational manner" which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 10, 11-13, are rejected under 35 U.S.C. 102(b) as being anticipated by Cordell et al. Cordell et al shows a primary combustion chamber (400, fig.1); a secondary combustion chamber fluidly connected to said primary combustion chamber (600, fig. 5); a heat exchanger fluidly connected to said secondary combustion chamber (700, fig. 1); and a rotating grate rotatably positioned within said primary combustion chamber for supporting the biomass during gasification (421, 422, fig. 1), an oxygen mixer positioned between said primary combustion chamber and said secondary combustion chamber (603, fig. 5), a feeder unit in communication with said primary combustion chamber for delivering biomass onto said rotating grate (300, fig. 2), a disintegration unit for disintegrating the biomass before entering said primary combustion chamber (200, 203, 204, fig.4), wherein said feeder unit includes a fuel magazine capable of storing a volume of the biomass for inputting biomass into said disintegration unit (200 a, fig. 2), said feeder unit includes a conveyor positioned between said disintegration unit and said primary combustion chamber (301b, fig. 2), said rotating grate includes a plurality of openings within for allowing air to pass upwardly through the biomass positioned upon said rotating grate (409, 413, fig. 6), an air distribution system for forcing air beneath said rotating grate through said openings (col. 6, lines 16-45), an ash disposal unit positioned beneath said rotating grate for removing collected ash from said primary combustion chamber (1440, fig. 7), said rotating grate has a shape and size similar to an interior of said primary combustion chamber (fig. 6), wherein said grate is capable of rotating in a continuous rotational manner (The apparatus is presently capable of performing this function).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cordell et al in view of Stolte. Cordell et al discloses a primary combustion chamber (400, fig.1); a secondary combustion chamber fluidly connected to said primary combustion chamber (600, fig. 5); a heat exchanger fluidly connected to said secondary combustion chamber (700, fig. 1); and a rotating grate rotatably positioned within said primary combustion chamber for supporting the biomass during gasification (421, 422, fig. 1), an oxygen mixer positioned between said primary combustion chamber and said secondary combustion chamber (603, fig. 5), wherein said grate is capable of rotating in a continuous rotational manner (The apparatus is presently capable of performing this function). Cordell et al discloses applicant's invention substantially as claimed with the exception of said feeder unit includes a plunger member that pushes the biomass into an opening within said primary combustion chamber onto said rotating grate, said plunger member moves along a path radial to said rotating grate, wherein said plunger member has a cyclical action, said opening within said primary combustion chamber is surrounded by an input member having a tubular structure, wherein said plunger member is slidably positioned within said input member, and wherein a front end of said plunger member extends near an interior of said primary combustion chamber, a drive motor mechanically connected to said rotating grate for rotating said rotating grate. Stolte teaches said feeder unit includes a plunger member that pushes

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the biomass into an opening within said primary combustion chamber onto said rotating grate (8, fig. 2), said plunger member moves along a path radial to said rotating grate (fig. 1), wherein said plunger member has a cyclical action (11, fig. 1), said opening within said primary combustion chamber is surrounded by an input member having a tubular structure (fig. 1), wherein said plunger member is slidably positioned within said input member, and wherein a front end of said plunger member extends near an interior of said primary combustion chamber (fig. 2), a drive motor mechanically connected to said rotating grate for rotating said rotating grate (10, fig. 1) for the purpose of providing a predetermined amount of fuel onto the grate. It would have been obvious to one of ordinary skill in the art to modify Cordell by including said feeder unit includes a plunger member that pushes the biomass into an opening within said primary combustion chamber onto said rotating grate, said plunger member moves along a path radial to said rotating grate, wherein said plunger member has a cyclical action, said opening within said primary combustion chamber is surrounded by an input member having a tubular structure, wherein said plunger member is slidably positioned within said input member, and wherein a front end of said plunger member extends near an interior of said primary combustion chamber, a drive motor mechanically connected to said rotating grate for rotating said rotating grate as taught by Stolte for the purpose of providing a predetermined amount of fuel onto the grate so that the fuel is more evenly distributed and the apparatus can operate more efficiently.

Claims 16, 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupfer (4014664). Kupfer discloses a primary combustion chamber (fig. 1); a rotating grate rotatably positioned within said primary combustion chamber for supporting the biomass during gasification (3, fig. 1); wherein said rotating grate is capable of rotating in a continuous

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rotational manner (col. 5, lines 64-66) and a drive motor mechanically connected to said rotating grate for rotating said rotating grate (col. 4, line 9), said rotating grate includes a plurality of openings within for allowing air to pass upwardly through the biomass positioned upon said rotating grate (fig. 1), an air distribution system for forcing air beneath said rotating grate through said openings (22, fig. 1). Kupfer discloses applicant's invention substantially as claimed with the exception of said rotating grate has a substantially planar upper surface. At the time the invention was made it would have been an obvious matter of design choice to a person of ordinary skill in the art to have said rotating grate has a substantially planar upper surface because applicant has not disclosed that the shape of the grate provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the shape of Kupfer or the claimed shape because both shapes perform the same function equally well.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupfer as applied to claim 16 above, and further in view of Fahenstock (1709902). Kupfer discloses applicant's invention substantially as claimed with the exception of a feeder unit in communication with said primary combustion chamber for delivering biomass onto said rotating grate, said feeder unit includes a plunger member that pushes the biomass into an opening within said primary combustion chamber onto said rotating grate. Fahenstock teaches a feeder unit in communication with said primary combustion chamber for delivering biomass onto said rotating grate (9, fig. 1), said feeder unit includes a plunger member that pushes the biomass into an opening within said primary combustion chamber onto said rotating grate (7, fig. 1) for the purpose of supplying fuel. It would have been obvious to one of ordinary skill in the art to

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modify Kupfer by including a feeder unit in communication with said primary combustion chamber for delivering biomass onto said rotating grate, said feeder unit includes a plunger member that pushes the biomass into an opening within said primary combustion chamber onto said rotating grate as taught by Fahrenstock for the purpose of supplying fuel so that the apparatus will operate more efficiently and safely.

Claims 1-5, 10, 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupfer in view of Cordell. Kupfer discloses a primary combustion chamber (3, fig. 1), a rotating grate rotatably positioned within said primary combustion chamber for supporting the biomass during gasification (3, fig. 1); wherein said rotating grate is capable of rotating in a continuous rotational manner (col. 5, lines 64-66) said rotating grate includes a plurality of openings within for allowing air to pass upwardly through the biomass positioned upon said rotating grate (fig. 1). Kupfer discloses applicant's invention substantially as claimed with the exception of a secondary combustion chamber fluidly connected to said primary combustion chamber; a heat exchanger fluidly connected to said secondary combustion chamber, an oxygen mixer positioned between said primary combustion chamber and said secondary combustion chamber, a feeder unit in communication with said primary combustion chamber for delivering biomass onto said rotating grate, a disintegration unit for disintegrating the biomass before entering said primary combustion chamber, wherein said feeder unit includes a fuel magazine capable of storing a volume of the biomass for inputting biomass into said disintegration unit, said feeder unit includes a conveyor positioned between said disintegration unit and said primary combustion chamber, an ash disposal unit positioned beneath said rotating grate for removing collected ash from said primary combustion chamber. Cordell teaches a secondary combustion chamber

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fluidly connected to said primary combustion chamber (600, fig. 5); a heat exchanger fluidly connected to said secondary combustion chamber (700, fig. 1), an oxygen mixer positioned between said primary combustion chamber and said secondary combustion chamber (603, fig. 5), a feeder unit in communication with said primary combustion chamber for delivering biomass onto said rotating grate (300, fig. 2), a disintegration unit for disintegrating the biomass before entering said primary combustion chamber (200, 203, 204, fig.4), wherein said feeder unit includes a fuel magazine capable of storing a volume of the biomass for inputting biomass into said disintegration unit (200 a, fig. 2), said feeder unit includes a conveyor positioned between said disintegration unit and said primary combustion chamber (301b, fig. 2), an ash disposal unit positioned beneath said rotating grate for removing collected ash from said primary combustion chamber (1440, fig. 7), for the purpose of reducing particulates and pollutants and improving the energy efficiency of the furnace and providing fuel to the apparatus and disposing of ash . It would have been obvious to one of ordinary skill in the art to modify Kupfer by including a secondary combustion chamber fluidly connected to said primary combustion chamber; a heat exchanger fluidly connected to said secondary combustion chamber, an oxygen mixer positioned between said primary combustion chamber and said secondary combustion chamber, a feeder unit in communication with said primary combustion chamber for delivering biomass onto said rotating grate, a disintegration unit for disintegrating the biomass before entering said primary combustion chamber, wherein said feeder unit includes a fuel magazine capable of storing a volume of the biomass for inputting biomass into said disintegration unit, said feeder unit includes a conveyor positioned between said disintegration unit and said primary combustion chamber, an ash disposal unit positioned beneath said rotating grate for removing collected ash

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from said primary combustion chamber (1440, fig. 7) as taught by Cordell for the purpose of reducing particulates and pollutants and improving the energy efficiency of the apparatus and supplying fuel to the apparatus and removing ash so that environmental requirements are met and providing for the heat generated from the apparatus not being wasted in light of the high cost of fossil fuels, and so that the apparatus will consume a greater quantity of matter and operate more productively.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

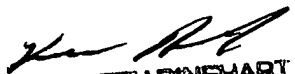
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B Rinehart whose telephone number is 571-272-4881. The examiner can normally be reached on 7:20 -4:20.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571-272-4881. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kbr


KENNETH RINEHART
PRIMARY EXAMINER